

Amendments to the Claims

The following listing of claims replaces all prior versions of the claims and all prior listings of the claims in the present application.

1-31. (canceled)

32. (new) A method for producing a metal wire for reinforcing an elastomeric material, wherein the metal wire comprises:

a metal core; and

a metal coating layer;

wherein the metal core comprises a predetermined initial diameter,

wherein the method comprises:

submitting the metal core to at least one surface treatment;

thermally treating the metal core;

depositing the metal coating layer on the metal core; and

drawing the metal-coated metal core;

wherein the at least one surface treatment predisposes a surface of the metal core to being coated with the metal coating layer,

wherein the metal coating layer is deposited on the metal core to a predetermined initial thickness using a plasma deposition technique, and

wherein the metal-coated metal core is drawn until:

the metal core comprises a final diameter smaller than the predetermined initial diameter; and

the metal coating layer comprises a final thickness smaller than the predetermined initial thickness.

33. (new) The method of claim 32, wherein submitting the metal core to at least one surface treatment, thermally treating the metal core, depositing the metal coating layer on the metal core, and drawing the metal-coated metal core are carried out in a substantially continuous manner.

34. (new) The method of claim 32, wherein the metal core is conveyed through a sequence of respective positions for submitting the metal core to at least one surface treatment, thermally treating the metal core, depositing the metal coating layer on the metal core, and drawing the metal-coated metal core, at a speed in a range from about 10 m/min to about 80 m/min.

35. (new) The method of claim 32, wherein submitting the metal core to at least one surface treatment comprises:

pickling the metal core in a pickling bath; and
washing the pickled metal core in water.

36. (new) The method of claim 35, further comprising:

drying the washed metal core.

37. (new) The method of claim 36, wherein drying the washed metal core is carried out using at least one blower.

38. (new) The method of claim 32, further comprising:
dry drawing the metal core before thermally treating the metal core.

39. (new) The method of claim 32, wherein the plasma deposition technique is selected from the group comprising: sputtering, evaporation by voltaic arc, plasma spray, and plasma-enhanced chemical vapor deposition (PECVD).

40. (new) The method of claim 32, wherein depositing the metal coating layer on the metal core is carried out in at least one vacuum deposition chamber at a first predetermined pressure.

41. (new) The method of claim 40, wherein depositing the metal coating layer on the metal core is carried out a plurality of times.

42. (new) The method of claim 40, wherein the first predetermined pressure is in a range from about 10^{-3} mbar to about 10^{-1} mbar.

43. (new) The method of claim 40, further comprising:
conveying the metal core in at least one pre-chamber at a second predetermined pressure higher than the first predetermined pressure;
wherein the at least one pre-chamber is arranged upstream of the at least one vacuum deposition chamber.

44. (new) The method of claim 43, wherein the second predetermined pressure is in a range from about 0.2 mbar to about 10 mbar.

45. (new) The method of claim 32, further comprising:
descaling a wire rod; and
dry drawing the wire rod to obtain the metal core comprising the predetermined initial diameter.

46. (new) The method of claim 32, wherein the metal coating layer comprises a first metal material different from a second metal material of the metal core.

47. (new) The method of claim 32, wherein the metal core comprises steel.

48. (new) The method of claim 32, wherein the metal coating layer comprises a metal material selected from the group comprising: copper, zinc, manganese, cobalt, tin, molybdenum, iron, and alloys thereof.

49. (new) The method of claim 32, wherein the metal coating layer comprises brass.

50. (new) The method of claim 49, wherein the brass comprises a copper content of about 60%-by-weight to about 72%-by-weight.

51. (new) The method of claim 46, wherein the first metal material comprises a predetermined amount of a lubricating agent.

52. (new) The method of claim 32, wherein the predetermined initial thickness is at least about 0.5 μm .

53. (new) The method of claim 32, wherein the predetermined initial thickness is between about 0.5 μm and about 2 μm .

54. (new) The method of claim 32, wherein drawing the metal-coated metal core causes the final diameter to be about 5-25% of the predetermined initial diameter.

55. (new) The method of claim 32, wherein the final diameter is in a range from 0.10 mm to 0.50 mm.

56. (new) The method of claim 32, wherein drawing the metal-coated metal core causes the final thickness to be about 5-25% of the predetermined initial thickness.

57. (new) The method of claim 32, wherein the final thickness is in a range from 80 nm to 350 nm.

58. (new) The method of claim 32, wherein the predetermined initial diameter is between about 0.85 mm and about 3 mm.

59. (new) The method of claim 32, wherein the predetermined initial thickness is between about 0.5 μm and about 2 μm .

60. (new) A metal wire for reinforcing an elastomeric material produced by the method of claim 32.

61. (new) A method for producing a metal cord for reinforcing an elastomeric material, the method comprising:

producing a plurality of wires by the method of claim 32; and
stranding the plurality of wires.

62. (new) A metal cord for reinforcing an elastomeric material, comprising:
a plurality of wires produced by the method of claim 32 that are stranded together.